

AD 651411

GROUP EFFECTIVENESS RESEARCH LABORATORY

DEPARTMENT OF PSYCHOLOGY

UNIVERSITY OF ILLINOIS

URBANA, ILLINOIS

Quarterly Report
April 30, 1967

Communication, Cooperation, and Negotiation
in Culturally Heterogeneous Groups

Report of Progress under Contract ARPA Order No. 454

Project Code 2870, Nonr 1834 (36)

with the

Advanced Research Projects Agency

STATEMENT NO. 1

Distribution of This Document is Unlimited

Fred E. Fiedler, Lawrence M. Stokrow, and Harry C. Triandis

Principal Investigators

ARCHIVE COPY



Quarterly Report
April 30, 1967

1. A Culture Assimilator program for Iran, consisting of two books (445 pp) has now been completed by M. M. and Arlene Chemers in Iran, as has a parallel control program on the geography of Iran (542 pp). Chemers has obtained the cooperation of the Iran-American Society in Tehran to cooperate with him in a large scale experiment on the efficacy of the Iranian Assimilator. Chemers also reports that he has been given tentative assurance that he can utilize students from the American school, as the hoped for cooperation of military personnel cannot be obtained. The Iranian Culture and Geography Assimilators have been typed and bound and shipped to Tehran. We expect to hear shortly from Chemers about arrangements for conduct of the study.

2. The study at the European School in Brussels, conducted by Ninane and Fiedler in Spring of 1964, has been partly reanalyzed and has now been prepared as Technical Report Number 51 (67-7). This report is now being prepared for distribution to our mailing list. It presents the study of member reactions to supposed team success or failure. The groups were composed of students from the 9th, 10th, and 11th grades of the European secondary school which serves children of Common Market officials. Three-man groups were composed either of children from the same country and language background (homogeneous), or from different countries, with the leader coming from the Germanic language group and the members from the Romance language group, or vice versa (heterogeneous). The study showed that the group heterogeneity had very little effect in this particular case, probably because of the stress with the school on being "European" and

working with members from other cultures. This suggests that heterocultural groups are not necessarily divisive, although these heterocultural groups had less pleasant group climates. Of major importance was the findings that the groups led by relationship-oriented (high LPC) individuals tended to scape-goat the lowest status member (the 9th grade student) in the failure condition. Also obtained was the finding that groups of relationship-oriented leaders were perceived by group members as being more pleasant.

3. The study conducted by Nayar and Touzard on negotiation and co-operation tasks, utilizing two-man teams of American and Indian graduate students has now been completed for distribution. The data have been re-analyzed by David Summers and written up as a journal article as well as a Technical Report. It will be distributed within the next few weeks. This study compared an Indian Culture Assimilator program on child-rearing with comparable ethnographic material in book form, and with a training program on physical geography of India. Thus, Summers et al. found that when Indian and American Ss were paired in a negotiation situation, negotiation behavior was substantially affected by cultural training, mediator LPC and task characteristics. These results can be summarized as follows:

- a. Intra-group relations are facilitated when the American members of the negotiation group has received training focused on concepts relevant to Indian culture; moreover, training by means of a self-instructional program (the culture assimilator) is more effective than training by a traditional essay.
- b. Intra-group relations are facilitated if the participants are not required to defend positions formally attributed to their

national constituents, but rather are permitted to interact without such formal restraints.

- c. When the negotiation task is formal, the negotiators are most effective if the mediator is oriented primarily toward maintaining harmonious relations between the negotiators (high LPC). In contrast, when the Negotiation task is informal, the maintenance of good interpersonal relations is apparently less difficult and need not be a concern of the mediator; here, the negotiators are most effective if the mediator tends to be task-oriented (moderate and low LPC).

4. We have now received criterion data on Peace Corps volunteers trained at the University of Texas. These volunteers were also given the Arab Culture Assimilator or the Middle East program on the physical geography of the Arab countries. The Peace Corps data unfortunately did not include the names of the trainees, but it did code the performance of the trainees by sex, LPC, and type of training received. It must be stressed that the culture assimilator training was given in addition to the considerable amount of training in area and language which these volunteers received. It represents, therefore, a very minor, and relatively insignificant increment to the total training they received at Texas. The results of the analysis indicate that the culture training appeared to be related to somewhat more effective performance of the male volunteers, although the difference in performance between culture and geography trained volunteers is very slight and undoubtedly insignificant. A considerable difference exists, however, between culture and geography trained female volunteers, with geography trained subjects

performing significantly better than culture trained volunteers. Moreover, culture trained males performed more effectively than did culture trained females, while geography trained females performed more effectively than the geography trained males. Further analyses are in progress.

5. Data collection has now been completed at Chanute AFB to determine the effect of leadership style and stress on performance of leaders. The data are now prepared for analysis. (Judith Ayer).

6. The analysis of group tasks by O'Brien (Technical Report No. 46) has been used to design an experiment on the effects of organizational structure and leadership style on group performance. Leader attitudes (LPC) and the cooperation requirements of the group task have been systematically varied. The design provides a way of assessing the effects of personal compatibility of group members on group performance and leadership style. O'Brien and Ilgen are currently collecting data for this study.

This study is an extension of previous work on task structure and the classification of tasks into interacting, coacting, and counteracting. Results obtained from this experiment will provide further information about:

- a. the effects of task structure upon communication, group performance, and leadership style.
- b. the determinants of group atmosphere.
- c. the effects of personal compatibility upon group performance and leadership style.

The method used in describing the group tasks was published in Human Relations, February, 1967 (Oeser and O'Brien), while the theory underlying the experiment will be published later this year in the Journal of Applied Behavioral Science (Leadership in organizational setting, O'Brien).

7. Data are presently being analyzed from a study by O'Brien and Hornik on leader judgments and organizational structure. Subjects were presented with descriptions of a large number of group situations. The groups varied in organizational structure and cultural homogeneity. Results will provide information about the joint effects of leader attitudes (LPC) and the favorability of the situation upon leader judgments about methods of structuring groups activity.

8. In order to obtain further information about the effects of organizational stress upon leader effectiveness and group process, Biglan is analyzing data collected by O'Brien. These data come from small groups of regular Army soldiers in Australia. Results so far have shown significant curvilinear relationship between organizational stress in small groups and group productivity. Under conditions of high and low stress productivity is lower than for conditions of medium stress.

9. A book by Fiedler, entitled A Theory of Leadership Effectiveness, will be published in August of 1967. This book interprets research of our work since 1951 under ONR contracts ONR-N6-ori-07135 and ONR Nonr 1834(36) and ARPA Order 454. It also spells out in some detail the Contingency Theory and supporting data, as well as summarizing the research on stress, coaching groups, higher management, and proposals for improving organizational performance by means of organizational engineering.

The theoretical developments described in the January 31, 1967, Quarterly Report have led to the design of an M.S. thesis project by Oncken. It concerns a set of 50 interpersonal roles and 50 interpersonal behaviors which are now being rated on four dimensions, using a type of Thurstone equal-appearing interval scaling for each dimension. These dimensions, which were derived from factor-analytic work by Triandis and others are:

I For behaviors

1. giving versus denying affect
2. giving versus denying status
3. formal-informal-intimate
4. hostile versus not hostile

II For roles

1. positive versus negative affect
2. low-high, equal, high-low status
3. formal-informal-intimate
4. high conflict versus low conflict

Correlations between the ratings on the four dimensions will be computed, and from the results, predictions about the facet structure of interpersonal roles and behaviors will be made. These predictions will then be tested by reverting to some already existing data which includes correlations between behaviors and between roles as they were rated on Role Differentials and Behavioral Differentials.

It is hoped that this project will provide the necessary empirical tests which will validate some aspects of the theory of interpersonal intentions. It is further hoped that the theory can become the basis for selecting culture assimilation episodes, as well as a basis for the organization of culture assimilator materials.

In this connection, Summers, Stewart and Oncken are carrying out a study designed to assess the effects of both cognitive and cultural heterogeneity on dyadic decision-making.

In order to develop a laboratory paradigm consistent with the long-range goals of the project, the study currently under way concerns the behavior of American and Arab Ss when asked to make joint judgments about a series of different foreign policies. Ss are being paired so as to assess the effects of two independent variables: (1) cultural homogeneity (American-American) versus heterogeneity (American-Arab); and (2) cognitive similarity (same beliefs about foreign policy) versus cognitive dissimilarity (opposed beliefs about foreign policy). Of particular concern here are the effects of these manipulations upon interpersonal conflict, compromise, depreciation of the other and the perceived discrepancy between task judgments.

Upon completion of this methodological study, a second study will be conducted in which American members of culturally heterogeneous pairs will be provided with different types of culturally-relevant information prior to interaction. The results of this second study will contribute to the selection of materials for inclusion in a cultural training program.

In addition, Triandis and Summers are completing preparations for a study to be conducted in conjunction with the Honduras project. Here,

American trainees will be asked to respond to Role and Semantic Differential instruments in two ways: (1) As they normally would, and (2) as they think a Honduran would. Thus, culturally trained and non-trained Ss will be compared in terms of their cognitive reorganization and, if conditions permit, in terms of their accuracy in simulating the responses of a representative sample of Hondurans.

The data from the Antecedent-Consequent study, described in previous quarterly reports have now been tabulated. They are currently being key-punched.

During the past quarter we mailed the reports on cross-cultural studies with Role and Behavioral Differentials (Technical Report No. 45), the use of Tucker's three-mode factor analysis in studies utilizing Ss from several cultures responding to behavioral differentials (Technical Report No. 50), and the use of Thurstone equal-appearing intervals procedures in the study of cultural differences in the meaning of social behaviors (Technical Report No. 49). A monograph summarizing Technical Reports 45 and 49, and incorporating the theory described in the January 31 Quarterly Report, has been submitted for publication as a monograph supplement of the Journal of Personality and Social Psychology.

During the past quarter we received data from representative samples of Greeks utilizing the techniques described in Technical Report No. 43 (which has now been accepted for publication by the Journal of Personality and Social Psychology) and Technical Report No. 45. These data will be analyzed in the next quarter. Role Differential data utilizing about 350 Ss per culture responding to 20 selected roles on 20 selected behavior scales have now been collected from American (McGuire), Indian (Saral), and

Greek (Triandis)Ss. Comparison of these responses is in progress. Opinion and personality items, utilized by Davis in American studies, have now been employed in Greece and analyses of these data has been completed.

It is hoped that after all this data is analyzed and integrated into a general theoretical framework concerning Greek and American national characters (see Technical Reports 43 and 45 for early formulation), it will be possible to write a culture assimilator for Greece that will be based on deeper understanding of a culture. The writing of "an essay" on Greek national character incorporating the results obtained so far from the work of Sub-project I, as well as Osgood's Atlas work, is planned for the coming summer. Such an essay may be used directly as a culture assimilator for Americans working in Greece, until a more elaborate assimilator is developed. Tests comparing the effectiveness of the essay and the more elaborate assimilator are planned for the future. In addition, we plan to design and execute specific group-dynamic studies testing deduction from the theory of interpersonal intentions and our conception of Greek and American national characters.

In summary, much of the work on Sub-project I, which has been completed to date, can be considered as inductive, i.e., developing new information. Now we have reached the point of integration of the information into systematic theoretical systems. The next step is to derive deductions from these theoretical systems and test them against new data.

ONR TECHNICAL REPORTS AND PUBLICATIONS

- Fiedler, F. E., Bass, A. R., & Fiedler, Judith M. The leader's perception of co-workers, group climate, and group creativity: A cross-validation. Technical Report No. 1, May, 1961.
- Bass, A. R., Hatton, G., & McHale, T. J. Originality, intelligence, and performance on problem-solving tasks: A pilot study of their relationship. Technical Report No. 2, April, 1962.
- McHale, T. J., & Stolurow, L. M. Concept formation with metrically Multi-valued clues and response categories. Technical Report No. 3, April, 1962.
- Fiedler, F. E. & Meuwese, M. A. T. The leader's contribution to performance in cohesive and uncohesive task groups. Technical Report No. 4, April, 1962. Also in J. abn. soc. Psychol., 1963, 67, 83-87.
- Triandis, H. C., Mikesell, Eleanor H., & Ewen, R. B. Some cognitive factors affecting group creativity. Technical Report No. 5, May, 1962. Also in Human Relations, 1965, 18, 33-55.
- Triandis, H. C., Bass, A. R., Ewen, R. B., & Mikesell, Eleanor H. Team creativity as a function of the creativity of the members. Technical Report No. 6, April, 1962. Also in J. appl. Psychol., 1963, 47, 104-110.
- Anderson, L. R. & Fiedler, F. E. The effect of participatory and supervisory leadership on group creativity. Technical Report No. 7, November, 1962. Also in J. appl. Psychol., 1964, 48, 227-236.
- Triandis, H. C., Mikesell, Eleanor H., & Ewen, R. B. Task set and attitudinal heterogeneity as determinants of dyadic creativity. Technical Report No. 8, November, 1962. Also in Human Relations, 1965, 18, 33-55.
- Hatton, G. I. Two-choice conditional probability learning with meaningful and non-meaningful stimuli. Technical Report No. 9, October, 1962.
- Fiedler, F. E. A Contingency Model of leadership effectiveness. Technical Report No. 10, July, 1963. Also in L. Berkowitz (Ed.), Advances in experimental social psychology, 1964, Vol. 1, 149-190.
- Frase, L. The effect of social reinforcers in a programmed learning task. Technical Report No. 11, September, 1963.
- Triandis, H. C. The influence of culture on cognitive processes. Technical Report No. 12, October, 1963. Also in L. Berkowitz (Ed.), Advances in experimental social psychology, Vol. 1. New York: Academic Press, 1964.
- Bereiter, C. Curricular and specific transfer + problem solving ability. Technical Report No. 13, October, 1963.
- Morris, C. G. & Fiedler, F. E. Application of a new system of interaction analysis to the relationships between leader attitudes and behavior in problem-solving groups. Technical Report No. 14, March, 1964.

- Triandis, H. C., Fishbein, M., & Hall, Eleanor R. Person perception among American and Indian students. Technical Report No. 15, June, 1964.
- Triandis, H. C. & Hall, Eleanor R. Creative problem solving in culturally heterogeneous groups. Technical Report No. 16, June, 1964.
- Forster, K. I., Triandis, H. C., & Osgood, C. E. An analysis of the use of the method of triads in research on the measurement of meaning. Technical Report No. 17, June, 1964.
- Anderson, L. R. Some effects of leadership training on intercultural discussion groups. Technical Report No. 18, June, 1964.
- Katz, Evelyn W. A content-analytic method for studying interpersonal behavior. Technical Report No. 19, October, 1964.
- Katz, Evelyn W. A study of verbal and nonverbal behaviors associated with social roles. Technical Report No. 20, October, 1964.
- Fishbein, M., Landy, Eva, & Hatch, Grace. Some determinants of an individual's esteem for his least preferred co-workers: An attitudinal analysis. Technical Report No. 21, February, 1965.
- Meuwese, W. A. T. & Fiedler, F. E. Leadership and group creativity under varying conditions of stress. Technical Report No. 22, March, 1965.
- Hackman, J. R. & Jones, L. E. Development of a set of dimensions for analyzing verbal group products. Technical Report No. 23, July, 1965.
- Hackman, J. R. Tests, questionnaires and tasks of the Group Effectiveness Research Laboratory: 1951-1964. Technical Report No. 24, July, 1965.
- Fiedler, F. E. The effect of cultural heterogeneity, leader power, and leader attitudes on group performance: A test of the Contingency Model. Technical Report No. 25, August, 1965. Also in Journal of Experimental Social Psychology, Vol. 2, No. 3, 1966, 237-264.
- Davis, E. E. & Triandis, H. C. An exploratory study of inter-cultural negotiation. Technical Report No. 26, October, 1965. Also in J. person. soc. Psychology, 1965, 2, 715-725.
- Parisi, D. Social reinforcement performance in programmed learning in Italy. Technical Report No. 27, September, 1965.
- Triandis, H. C. & Davis, E. E. Some methodological problems concerning research on negotiations between monolinguals. Technical Report No. 28, December, 1965.
- Fiedler, F. E. & Meuwese, W. A. T. The effect of stress on the contribution of member intelligence to group creativity. Technical Report No. 29, January, 1966.
- Anderson, L. R. Initiation of structure, consideration, and task performance in intercultural discussion groups. Technical Report No. 30, April, 1966.

- Chemers, M. M., Fiedler, F. E., Lekhyananda, D., & Stolurow, L. M. Some effects of cultural training on leadership in heterocultural task groups. Technical Report No. 31, April, 1966. Also in International Journal of Psychology, 1966, 1, 301-314.
- Davis, E. A methodological study of behavioral and semantic differential scales relevant to intercultural negotiations. Technical Report No. 32, June, 1966.
- Fiedler, F. E. A review of research on ASo and LPC scores as measures of leadership style. Technical Report No. 33, May, 1966.
- Triandis, H. C., Shanmugam, A. V., & Tanaka, Y. Interpersonal attitudes among American, Indian, and Japanese students. Technical Report No. 34, July, 1966.
- Triandis, H. C. Toward an analysis of the components of interpersonal attitudes. Technical Report No. 35, July, 1966.
- Davis, E. E. & Grobstein, Nadine. Multiple factor analysis of interpersonal perception. Technical Report No. 36, December, 1966.
- Triandis, H. C., Vassiliou, Vasso, & Thomanek, E. K. Social status as a determinant of respect and friendship acceptance. Technical Report No. 37, August, 1966. Also in Sociometry, December, 1966.
- Naidoo, Josephine C. An inquiry into the structure of attitudes and behavior: A validation study. Technical Report No. 38, August, 1966.
- Osgood, C. E. Speculation on the structure of interpersonal intentions. Technical Report No. 39, September, 1966.
- Parisi, D. Italian word association norms. Technical Report No. 40, July, 1966.
- Parisi, D., Cappelli, U., & Stolurow, L. M. Contextural predictability and frequency factors. Technical Report No. 41, August, 1966.
- Stolurow, L. M. & Santhai, Suthita (with assistance of Koopman, Ray). Critical incidents with heterocultural interactions. Technical Report No. 42, November, 1966.
- Triandis, H. C., & Vassiliou, Vasso. Frequency of contact and stereotyping. Technical Report No. 43, October, 1966.
- Fiedler, F. E. Leadership style and the performance of coacting groups. Technical Report No. 44, October, 1966.
- Triandis, H. C., Vassiliou, Vasso, & Nassiakou, Maria. Some cross-cultural studies of subjective culture. Technical Report No. 45 (67-1), January, 1967.
- O'Brien, Gordon. Methods of analyzing group tasks. Technical Report No. 46 (67-2), January, 1967.

- Hunt, J. G. A test of the leadership contingency model in three organizations. Technical Report No. 47 (67-3), January, 1967.
- Nealey, S. M. & Blood, M. Leadership performance of nursing supervisors at two organizational levels. Technical Report No. 48 (67-4), January, 1967.
- Triandis, H. C., Vassiliou, Vasso & Nassiakou, Maria. Some cultural differences in the perception of social behavior. Technical Report No. 49, (67-5), February, 1967.
- Triandis, H. C. Tucker, L. R., Koo, Ping, & Stewart, T. Three-mode factor analysis of the behavioral component of interpersonal attitudes. Technical Report No. 50 (67-6), February, 1967.
- Ninane, P., & Fiedler, F. E. Member reactions to success and failure of task groups. Technical Report No. 51 (67-7), May, 1967.
- Fishbein, M., Landy, Eva, & Hatch, Grace. Consideration of two assumptions underlying Fiedler's Contingency Model for the prediction of leadership effectiveness. Technical Report No. 52 (67-8), May, 1967.